



Doing What Works

ED.gov



Audio

FULL DETAILS AND TRANSCRIPT

Using Benchmarks to Guide Assessment

Madison Elementary School, Washington • May 2008

Topic: National Math Panel: Critical Foundations for Algebra
Practice: Mastery Framework

Highlights

- Purpose and value of assessment grid for grouping for instruction and re-teaching
- Use of assessment grid for error analysis
- Example of analyzing item to determine student confusion
- Comparing grids from year to year
- Helping students compare results on formative assessments with final assessments
- How students self-assess by looking at how other students' solutions were graded

About the Site

Madison Elementary School
Spokane, WA

Demographics

76% White

6% Hispanic
5% Black
3% Asian
2% Native American
24% Free or Reduced-Price Lunch
3% English Language Learners
18% Special Education

Madison has put many practices and strategies in place to “leave nothing to chance” when it comes to teaching mathematics. The staff has deliberately reviewed all aspects of instruction and have well-developed approaches in the following areas:

- Philosophy of building conceptual understanding, problem solving, and fluency with facts;
- Using an open number line to teach fractions;
- Teachers’ strategies for encouraging effort, including messages to parents about the importance of effort and persistence;
- Assessment grids used to track performance on benchmark assessments to analyze individual needs and whole class needs for re-teaching; and,
- Structured protocol for reviewing student work.

Full Transcript

I am Sharon Leonard. I teach at Madison Elementary in Spokane, Washington, and I am the Math coach.

I am Rita Hadley. I teach at Madison Elementary in Spokane, Washington, and I teach third grade.

I am Denny Abel. I teach at Madison Elementary in Spokane, Washington, and I teach fourth grade.

I am Christian Skalstad, and I teach at Madison Elementary in Spokane, Washington, and I teach third grade.

My name is Jennifer Wilson. I teach at Madison Elementary, and I teach a four-five combo.

Wilson: We developed the assessment grid to improve student instruction in our instructional practices.

Abel: And because our instruction is data driven, it was the way to organize the data.

Skalstad: The advantages of the assessment grid is that it gives you a big picture of how your class, as a whole, is doing. I think the trend in the past has been to give an assessment and then you move on, and you don’t really look back and see what do kids still need practice with or what do they need reteaching on. And this gives you a way of looking at your class and individuals, that maybe they need to go back and have some reteaching or some small group, or also maybe just have a small review, so that they can get better at

those specific skills.

Leonard: It does help with planning for future instruction, as Christian was saying, how you can look, and there is your lesson plan for the next week almost where you can look and say, “I can see this area they are real strong in. I am going to move on from there, maybe just keep a small review going there. Here, there is a whole pocket of children that didn’t do well; I am going to pull a small group and really work more deeply with this. And here, there is just one student, maybe they are candidate for tutoring or need some different kind of instruction individually.”

Wilson: And I use this for error analysis—further break it down. So if I see these four kids missed it, if I look at it again, “Did they miss it because they didn’t read the question properly, or did they miss it because they didn’t know the concept?” And if there is a question they didn’t read it carefully, then they can go back and learn from their mistakes on the next test. But if they still don’t have it, pull a small group, and work with them to make sure they get.

Leonard: So Jennifer, you mentioned error analysis, you want to tell us a little bit more about that?

Wilson: Sure: If you look at, for example, this one dealt with parallel and perpendicular lines. When we broke it down, some of the kids—I believe it was they had to highlight the lines in blue or something—some of the kids didn’t read that part of the question, so they didn’t do that. Some of the kids were using perpendicular, doing perpendicular lines, instead of parallel lines. And that, rather than a reading question, it would be a confusion of the two concepts. So, looking at those kind of reading questions, or if it’s confusion. And especially for multiplication-division questions, if you can break it down to whether they made a computational error or whether they didn’t actually know the concept or if there was some sort of misunderstanding there.

Abel: I like to look at it and then compare it to the previous year’s scores. And then at that point, I can see if something I have been teaching was a little bit better than what I taught the previous year or maybe I have some holes that I need to fill.

Leonard: I am curious about this. Do you keep your assessment grid just on paper, or do you—I know you do a lot of technology on the computer.

Abel: Yeah, I keep these not on paper. I keep them electronically. So I have them in an Excel spreadsheet, and I keep them from year to year.

Leonard: I have been using it with formative assessment, as well as just the final unit assessment, and that’s been a good place to compare as well. So the students can see their work on their formative assessment, and then they have a little more time to work and hone their skills and understand concepts a little more deeply. And then when we give the final assessment, they can see improvement, and they know that they can learn, that they are good mathematicians.

What does self-assessment look like in your classroom?

Hadley: When we look at this assessment, and we discuss it; and we use the document camera to go over some of the work that the other students have used, and they look at what they might have given for their answer; and especially on those extended responses—when they look and they look at samples that are a “two” and the samples that would be a “one”, worth “one” or a “zero,” they can say, “Oh, I just didn’t explain that far enough; or I need to just go into that deeper, or show my work or show my equation.” And I think that’s a good self-assessment piece.